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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,570	07/27/2001	Wesley Wilkinson	1674/43755CO	9318

7590 04/06/2004

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EXAMINER	
BOTTORFF, CHRISTOPHER	
ART UNIT	**PAPER NUMBER**
3618	

DATE MAILED: 04/06/2004

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 21

Application Number: 09/915,570
Filing Date: July 27, 2001
Appellant(s): WILKINSON, WESLEY

Vincent J. Sunderdick
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 23, 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on January 23, 2004 has been entered.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 22-29, 35 and 45-57 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,348,326	FULLENKAMP et al.	9-1994
GB 2 232 386 A	LLOYD	12-1990

Stabilus, Gas Springs Technical Information, May 1995

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 21-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Fullenkamp et al. US 5,348,326.

Fullenkamp et al. discloses a trolley with a control wheel assembly having a longitudinal axis of travel and an array of four castors that are disposed at the corners of the trolley. See column 2, lines 3-46. The assembly includes a fixed wheel 44, and a second wheel 46, both positioned in a region where the load center of the trolley and

the center of the array of castors coincide. Moreover, the principle of placing a control wheel where the load center of the trolley and the center of the array of castors coincide is well established in the art, and further examples are provided in the art of record. The fixed wheel rotates about a horizontal axis but cannot rotate about a vertical axis. Also, a biasing and damping means, in the form of a gas strut, is provided with each fixed wheel. Note column 2, lines 29-31. The biasing force of the biasing and damping means is independent of the load on the trolley and the force of the bias means does not exceed the weight of an empty trolley. The traction force requirements for a vertical position of the fixed wheel are a substantial function of a mass of the trolley. Furthermore, a lifting means is provided for lifting the fixed wheel out of contact with the ground.

Claims 21-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lloyd in view of the admitted prior art (Stabilus Gas Springs Technical Information).

Lloyd discloses a trolley with a control wheel assembly having a longitudinal axis of travel and an array of four castors that are disposed at the corners of the trolley (see figure 1). The assembly includes a fixed wheel 34 positioned in a region where the load center of the trolley and the center of the array of castors coincide. The fixed wheel rotates about a horizontal axis 35 but cannot rotate about a vertical axis (see figure 3 and page 4, lines 27-28). A strut assembly is provided having a first part 36 connected to a member which rotatably supports the fixed wheel at axis 35 and a second part 39 which is fixed in use to the trolley (see figure 3). Also, a biasing and damping means 43

is provided with the fixed wheel, and in that the fixed wheel and biasing and damping means are centrally located, the biasing and damping means has a castor wheel on each side. The biasing force of the biasing and damping means is independent of the load on the trolley and the force of the bias means does not exceed the weight of an empty trolley (see figure 1 and page 5, lines 1-5). Since the force of the biasing and damping means is independent of the load on the trolley, the traction force requirements for a vertical position of the fixed wheel are a substantial function of a mass of the trolley. A lifting means 48 is provided for lifting the fixed wheel out of contact with the ground (see figure 3 and page 3, lines 6-10).

In addition, providing a plurality of fixed wheels that each have a biasing and damping means represents an obvious duplication of parts and is taught by Lloyd (see page 9, lines 22-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of fixed wheels, each with damping and biasing means, in order to improve the degree of control in the trolley. However, Lloyd lacks a self-contained gas strut.

In the interviews conducted on May 16, 2000 and August 2, 2000, Applicant admitted that the claimed self-contained gas strut was a prior art design of the type demonstrated in the interviews and described in the Stabilus Gas Springs Technical Information publication. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the spring of Lloyd with the admitted prior art gas strut in order to provide counterbalance and force assistance to the fixed wheel. The claimed functional characteristics of the biasing and damping means (i.e.: the

biasing force being independent of the load on the trolley, not exceed the weight of an empty trolley, and the traction force requirements for a vertical position of the fixed wheel being a substantial function of a mass of the trolley) are also true in this combined system.

(11) Response to Argument

Claims 21-59 are Anticipated by Fullenkamp et al.

On page 5 of Appellant's brief, Appellant asserts that Fullenkamp et al. do not disclose the claimed arrangement of a gas strut. In particular, Appellant asserts that the mechanism of Fullenkamp et al. is for hospital beds; uses a gas spring and not a gas strut; uses a swing arm mechanism; and cannot provide controlled contact, force independent of the load of the trolley, or force that does not exceed the weight of the trolley because the gas spring is not co-linear with the line of vertical travel of the control wheel.

However, Appellant indicates on lines 8-10 of page 1 of the specification that the "trolley" of the present invention relates to "trolleys for the carriage or transport of patients...in hospitals..." Thus, the hospital bed of Fullenkamp et al. is a "trolley," as defined by Appellant.

Furthermore, during the prosecution of parent application, Serial No. 08/945,017, an interview was held between the examiner and Appellant in which Appellant provided the examiner with the Gas Springs Technical Information manual by the Stabilus

company. At that interview, Appellant explained to the examiner that the gas struts used in Appellant's trolleys are actually the gas springs manufactured by Stabilus and described in the Stabilus Gas Springs Technical Information manual. Therefore, the expression "gas strut" as used in the claims is synonymous with "gas springs," and the gas spring 62 used in the trolley of Fullenkamp et al. is a gas strut within the broadest reasonable interpretation of the claims. (Note that gas spring 62 is described in column 4, lines 34-48, of Fullenkamp et al.)

Also, the swing arm mechanism of Fullenkamp et al. is a "fixed wheel" with in the broadest reasonable interpretation of the claims. Appellant acknowledges this on page 5, lines 4-5, of Appellants brief where Appellant states "Fullenkamp discloses a mechanism which provides a fixed or controlled wheel..." In the present invention, the term "fixed" does not mean that the central wheel mechanism does not move at all, but that the wheel is limited to rolling in the forward and rearward direction. Page 3, lines 9-12, of the specification explain that the fixed wheel means is a wheeled device in which the wheel "is able to rotate about it's hub axis but is not able to rotate about a vertical axis as can a castor." This is further explained on page 7, lines 28-32, of the specification, which states:

> "The control wheel is, as previously disclosed, "fixed" in that the wheel cannot rotate about a vertical axis as a castor is able. The wheel is able to rotate about it's normal horizontal rotation axis and is "fixed" to do so in the direction in which it is normally desired that the trolley proceed."

Similarly, the wheel devices that support wheels 44 and 46 of Fullenkamp et al. allow the wheels to rotate about their hub but not about a vertical axis. Although the "swing

arm" of Fullenkamp et al. allows vertical movement of the wheels as the "swing arm" pivots about a horizontal axis, the expression "fixed wheel" does not exclude such movement or a swing arm structure. Thus, the mechanism of Fullenkamp et al. is a fixed wheel. Moreover, when Appellant previously presented claims that defined a distinction between the structure of Appellant's control wheel assembly and the swing arm mechanisms of the prior art, the claims were allowed. In US Patent No. 6,331,009 granted to Appellant, claim 1 defines such distinct structure in the form of the telescopic parts that maintain the fixed wheel in a fixed direction. However, no such distinctions are defined by the present claims.

In addition, although the gas strut of Fullenkamp et al. is not co-linear with the line of vertical travel of the control wheel, the gas strut is still able to provide controlled contact between the fixed wheel and the surface, force that is independent of the load on the trolley, and force that does not exceed the weight of the trolley. Fullenkamp et al. indicate the ability of the gas strut to do this on column 5, lines 11-22, which states:

> "Downward motion continues until the pair of steering wheels contact the surface 31, and they are held in contact with the surface 31 by the force applied by the gas cylinder 62. As the pair of wheels moves over depressions and rises in the surface 31, the gas cylinder 62 applies a resilient biasing force to maintain the pair of steering wheels in constant contact with the surface 31. When the pair of wheels is in contact with the surface, the weight of the carrier and the object on the carrier is supported by the castors which remain in contact with the surface simultaneously with the pair of wheels."

Since the force of the gas cylinder holds the steering wheels 44, 46 in contact with the surface 31, controlled contact is maintained between the fixed wheel and the surface. Since the casters support the weight of the carrier and the object on the carrier

when the steering wheels are in contact with the surface, the force of the gas spring is independent of the load on the trolley. That is, the load on the trolley does not affect the force applied to the steering wheels, but affects the weight applied to the casters. In fact, Fullenkamp et al. indicate that the force applied to the steering wheels by the gas spring is constant regardless of the load carried by the trolley. Column 5, lines 30-33, of Fullenkamp et al. states that the force applied to the steering wheels by the gas spring "is in the range of 300 newtons to 500 newtons, and preferably is 400 newtons." Also, since the casters remain in contact with the surface when the steering wheels are in contact with the surface, the force of the gas strut does not exceed the weight of the trolley such that the gas strut lifts the casters from the surface.

Claims 21-59 are Obvious Under Lloyd in View of the Admitted Prior Art (Stabilus Gas Springs Technical Information)

As a threshold matter, the examiner submits that compression springs, such as spring 43 of Lloyd, and gas springs, such as the gas struts developed by Stabilus, are obvious equivalents within the family of springs. Fullenkamp et al. even suggests that the ability to interchange gas springs and compression springs was old and well known to those of ordinary skill in the art at the time the invention was made. Column 2, lines 29-31, of Fullenkamp et al. indicates that the biasing means used on their trolley may be "comprised of a gas spring or compression springs." Although gas springs have different spring characteristics than compression springs, exchanging the one type of spring for the other does not constitute non-obvious invention. Thus, exchanging

compression spring 43 of Lloyd with a gas spring developed by Stabilus would have been obvious to one of ordinary skill in the art at the time the invention was made in order to provide the system with effective spring characteristics.

Pages 6-10 of Appellant's brief discuss the different spring characteristics of the compression spring of Lloyd and a gas spring. However, claims 21-59 are rejected based on a trolley with a gas spring resulting from the combination of the teachings of Lloyd and the Stabilus manual, and not a trolley utilizing a compression spring. It is well settled that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The trolley produced by the combination of Lloyd and the Stabilus manual would utilize a gas strut, rather than a compression spring and would offer the same spring characteristics of the gas strut of Appellant's invention. Thus, the differences between the spring characteristics of a compression spring and a gas spring are not relevant to the rejection cited by the examiner.

In addition, on lines 18-21 of page 6 of Appellant's brief Appellant asserts that the guide wheel of Lloyd functions so that only upward travel for the guide wheel is allowed and the wheel could not follow a trough in the surface. However, this assertion is not accurate and these features are not claimed. The guide wheel of Lloyd is biased downward to ensure contact between the wheel and the ground, as discussed on lines 1-5 of page 5 of Lloyd. Although the range of motion of Lloyd's wheel is more limited than the range of motion of the wheel of the present invention, the range of motion

provided by Lloyd's wheel is sufficient to provide the "controlled contact" claimed by Appellant.

Separate Patentability of the Claims

On pages 10 and 11 of Appellant's brief, Appellant contends that various claims are separately patentable. However, none of the claims are patentable. The lifting means of claim 35 is satisfied by the mechanism associated with pedal 26 discussed by Fullenkamp et al. on lines 41-66 of column 5 and depicted in Figures 1 and 2. Lloyd also provides a lifting means in member 48 discussed on page 3, lines 6-10, page 9, lines 11-14, and depicted in Figure 3. The plurality of fixed wheels and struts defined by claims 45 and 47 are satisfied by the system supporting wheels 44 and 46 depicted in Figure 3 of Fullenkamp et al. and the teaching on page 9, lines 22-24, of Lloyd. Also, the caster wheels of claim 46 are satisfied by wheels 14 and 18 discussed by Fullenkamp et al. on lines 20-23 of column 3 and by wheels 18, 19, 26, and 27 depicted in Figures 1 and 2 of Lloyd. Since these caster wheels are provided at the corners of the trolleys, they are on each side of the gas strut.

Conclusion

For the above reasons, it is believed that the rejections should be SUSTAINED.

Respectfully submitted,

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April 1, 2004

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